agri~fax
Field Crops
Alberta AGRICULTURE

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Varietal Description of Hyola 40 Spring Canola Hybrid

Origin and breeding

Hyola 40, tested as CS002, is a single cross hybrid developed by Pacific Seeds, division of Continental Grain, Australia, using the polima cytoplasmic male sterility system.

Varietal characteristics

Plant characteristics

Plant height: similar to that of Westar

Lodging resistance: similar to that of Westar

Maturity: slightly later than that of Westar

Disease reaction: moderately susceptible to blackleg (*Leptosphaeria maculans*) and better than Regent, Tribute and Westar in tolerance to root rot (*Rhizoctonia solani*); consistently had a proportion of white rust (*Albugo candida*) susceptible plants

Seed characteristics

Oil content: lower than that of Westar

Protein content: lower than that of Westar

Glucosinolate content: lower than that of Westar

Chlorophyll content: similar to that of Westar

Performance

Hyola 40 has demonstrated acceptable yields with improved blackleg tolerance and glucosinolate levels as compared to Westar. Hyola 40 is slightly later in maturity than Westar and has lower oil and protein levels than Westar.

Maintenance of breeder seed

Garst Seed Co.

Canadian distributor

Garst Seed Co. (Canada)

Recommended by

Western Canada Canola/Rapeseed Recommending Committee

Copies of this and related publications may be obtained from the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta T6H 5T6 or Alberta Agriculture's District Offices.

Table 1. Performance of Hyola 40 and Westar, Western Co-operative Rapeseed Trials, Medium Maturity Zone, 1986-1988

	Yield (00's kg/ha)	Height (cm)	Lodging (1-5)*	Maturity (days)	Oil (%)	Protein (%)	Glucosin. (μ m/g)	Chlor.** (ppm)
1986								
Hyola 40	25.9	81.7	1.6	102.0	43.2	45.3	5.8	—
Westar	26.2	82.0	1.6	101.3	44.9	44.6	11.3	—
1987								
Hyola 40	26.2	90.5	2.0	104.0	41.8	45.9	7.4	32.3
Westar	23.8	88.2	2.3	103.1	43.7	48.2	14.0	38.9
1988								
Hyola 40	20.1	87.8	1.1	95.8	42.7	44.5	8.4	17.1
Westar	21.5	90.0	1.0	94.8	44.8	45.5	12.9	20.0
Mean								
Hyola 40	—	86.7	1.6	101.0	42.6	45.2	7.2	24.7
Westar	—	86.7	1.6	99.7	44.5	46.1	12.7	29.5

1986: Saskatoon, Melfort
1987: Vermilion, Scott, Saskatoon, Watrous, Meath Park, Melfort, Carrot River
1988: Lashburn, Scott, Meath Park, Melfort
*1 = no lodging
** Chlor. = chlorophyll (parts per million)

Table 2. Disease Reactions[1] of Hyola 40 and check varieties, Western Co-operative Rapeseed Trials, 1987-88

Variety	Blackleg (0-100)*	Blackleg (0-100)**	(0-5)***	Root Rot (0-5)	White Rust (0-100)		
1987							
Hyola 40	8.44	25.31	2.07	1.40	21.11		
Westar	14.65	32.30	4.10	1.80	6.11		
Regent	13.99	16.98	2.70	1.73	3.52		
Tribute	19.98	23.98	2.33	1.41	4.07		
					Wpg. (0-9)	Sask. (%)	
1988							
Hyola 40	—	8.30	2.43	0.358	1.225	8.06	
Westar	—	34.47	2.92	1.100	0.050	0.00	
Regent	—	34.17	2.15	0.700	0.025	0.00	
Tribute	—	44.03	2.10	0.658	0.000	0.00	

*Saskatoon (supplementary)
** Saskatoon
*** University of Manitoba
[1]0= no disease

Table 3. Agronomic performance of Hyola 40 and check varieties, Western Co-operative Rapeseed Test A, 1987-1988

Variety	Yield (00's kg/ha)	Oil (%)	Protein (%)	Maturity (days)	Height (cm)	Lodging (1-5)	Glucosin. (μm/g)	Chlor. (ppm)
1987								
Hyola 40	2630	41.8	44.9	104	98	2.3	7.1	35.3
Westar	2630	43.7	47.0	102	96	2.6	12.3	34.4
Regent	2080	43.1	47.7	105	105	2.0	13.7	29.4
1988								
Hyola 40	2570	42.4	—	98	97	1.7	—	—
Westar	2510	44.4	—	98	97	1.8	—	—
Regent	2310	43.9	—	101	101	1.8	—	—

Locations: Winnipeg, Portage la Prairie, Brandon, Morden, Altona, Carman, Miami, Indian Head, Lashburn, Loon Lake, Melfort, Somme, Carrot River, Meath Park, Saskatoon, Outlook (irrigated), Scott, Watrous, Regina, Lethbridge (irrigated), Ellerslie, Westlock, Vermilion, Penhold, Kelsey, Lacombe, Olds, Delacour, Beaverlodge, Fairview, Fort Vermilion

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